

WHAT IS CLAIMED IS:

1. A system comprising
switches; and
resistors,

wherein respective ones of each of the switches is connected in series with respective ones of each of the resistors to form switch-resistor branches;

wherein the switch-resistor branches are connected in parallel between first and second nodes.

2. The system of claim 1, wherein respective ones of the switches receive control signal to turn them ON, which forms an equivalent resistor having an equivalent resistance allowing respective ones of the switch-resistor branches to have current flow, such that a resistance of the switch is substantially insignificant compared to a resistance of the resistor in each of the switch-resistor branches making an equivalent resistance substantially linear.

3. The system of claim 1, wherein:

each of the switches has a first resistance value; and

each of the resistors has a second resistance value, wherein the first resistance value is orders of magnitude less than the second resistance value, such that an equivalent resistance value of each respective one of the switch-resistor branches is substantially linear.

4. The system of claim 1, wherein at least one of the switches is always closed, such that current can always flow through at least one switch-resistor branch.

5. The system of claim 1, wherein a resistor is coupled between the first and second nodes forming a resistor only branch, such that current can always flow through the resistor only branch.